

FIG. 1

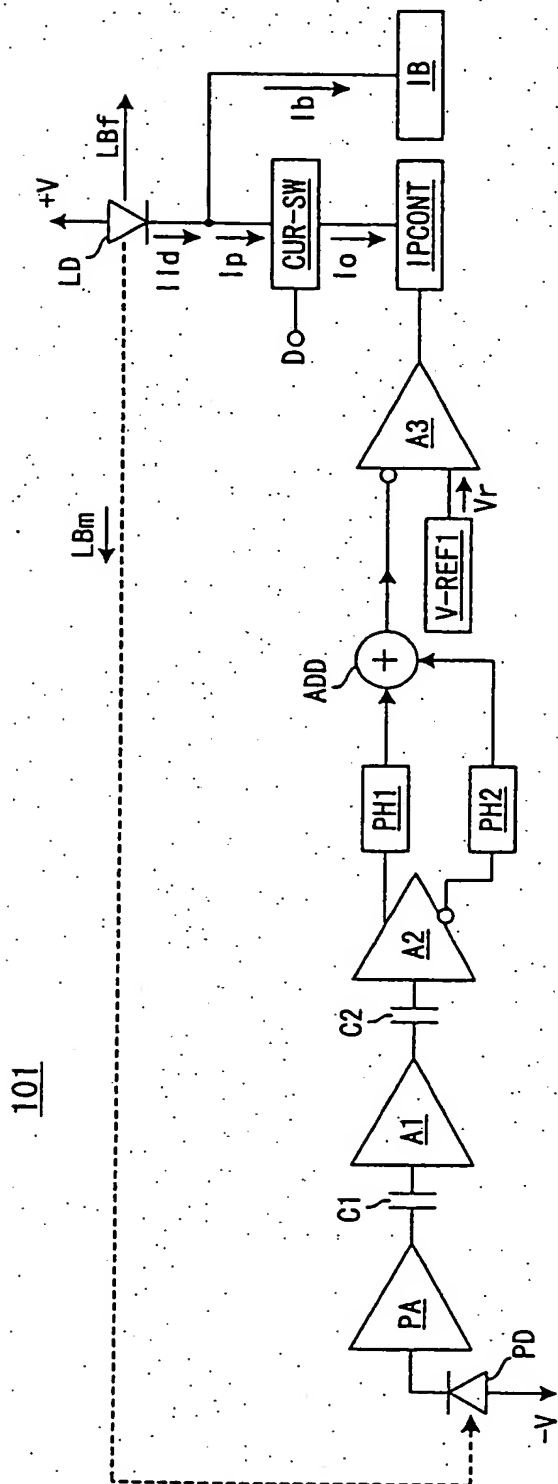


FIG. 2

FIG. 3

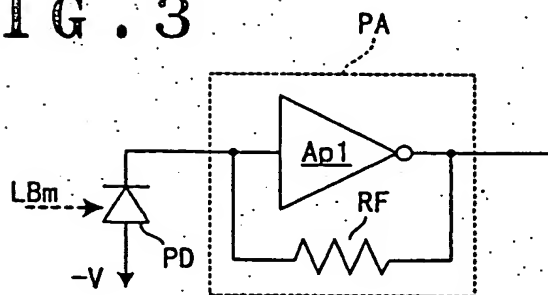


FIG. 4

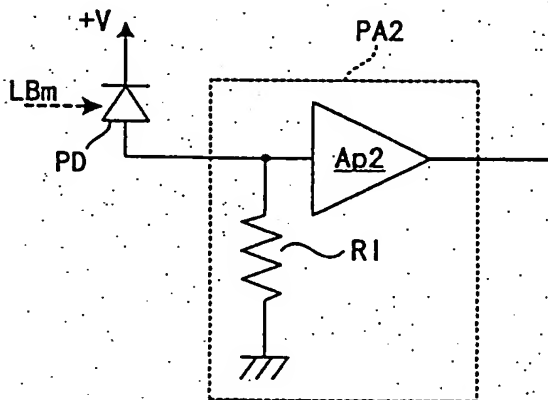


FIG. 5A

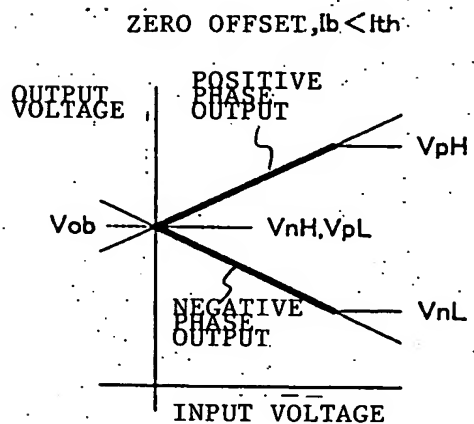


FIG. 5B

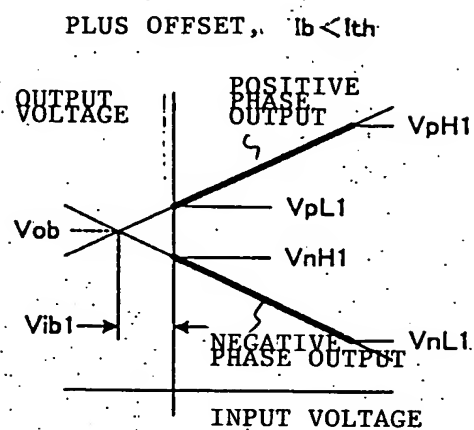


FIG. 5C

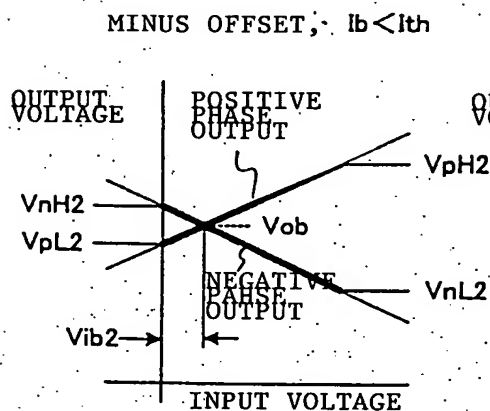
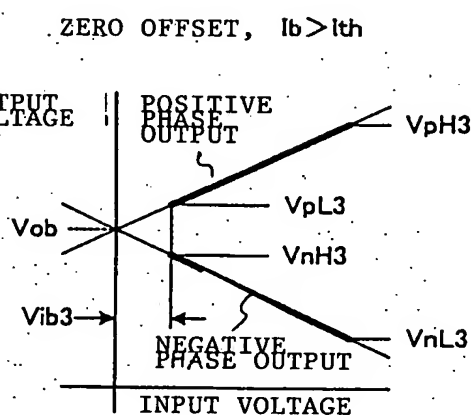


FIG. 5D



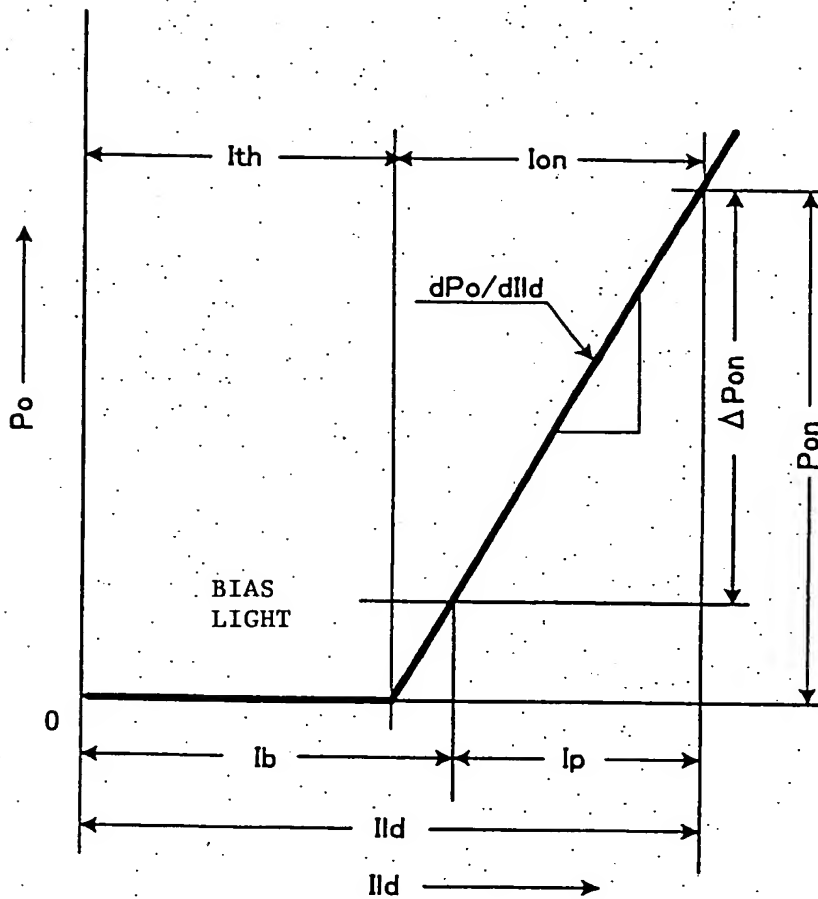


FIG. 6

FIG. 7A

ZERO OFFSET
 SAME "1/0" RATIO
 AC COUPLED INPUT

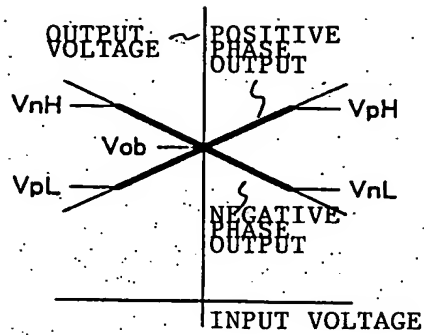


FIG. 7B

ZERO OFFSET
 AC COUPLED INPUT

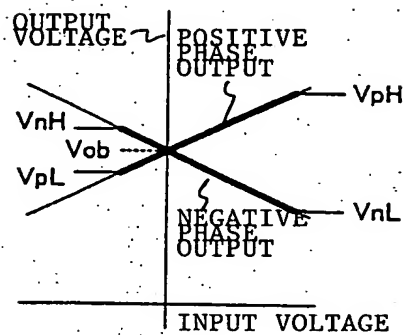
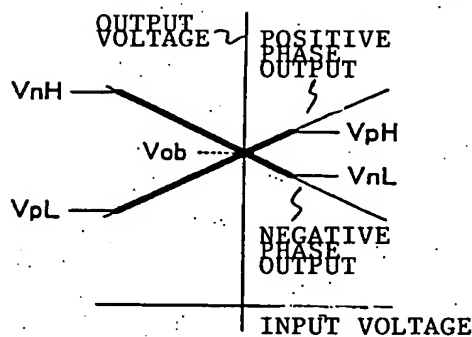


FIG. 7C

ZERO OFFSET
 AC COUPLED INPUT



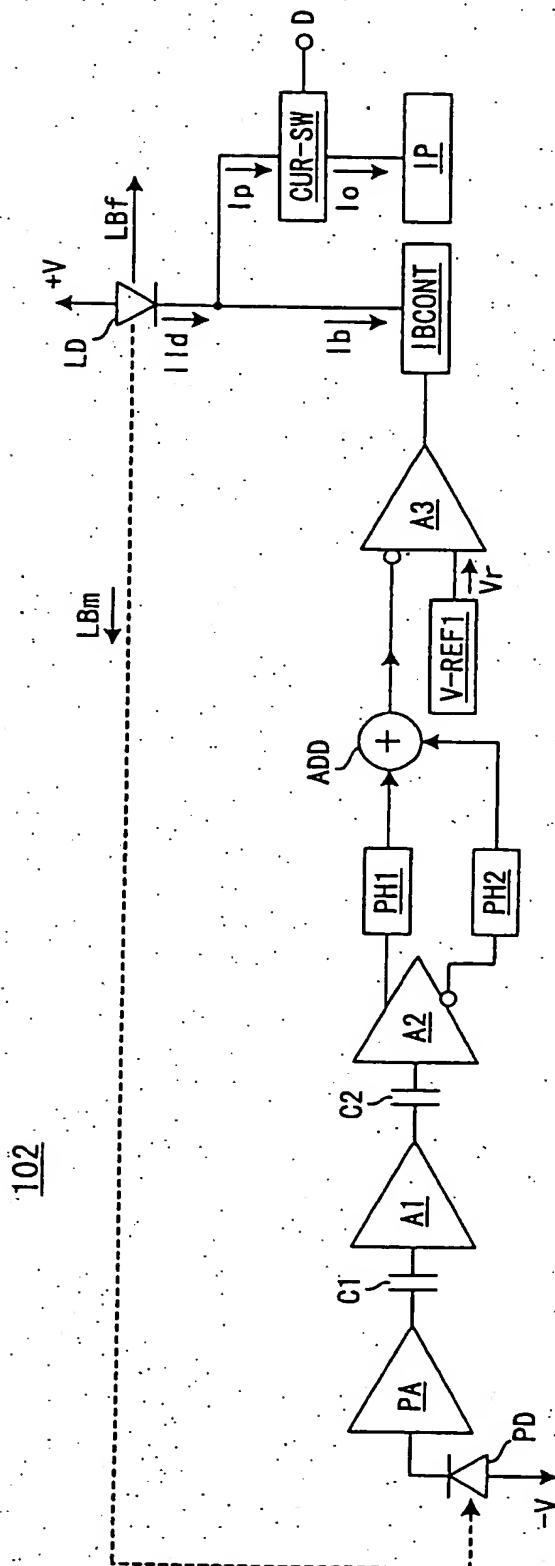


FIG. 8

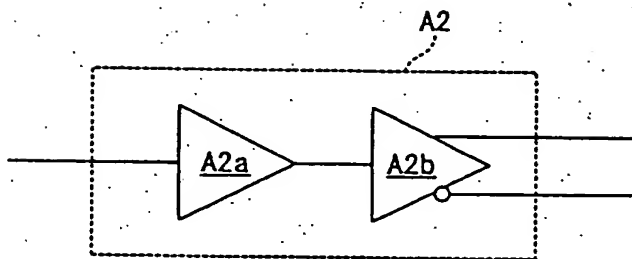


FIG. 9

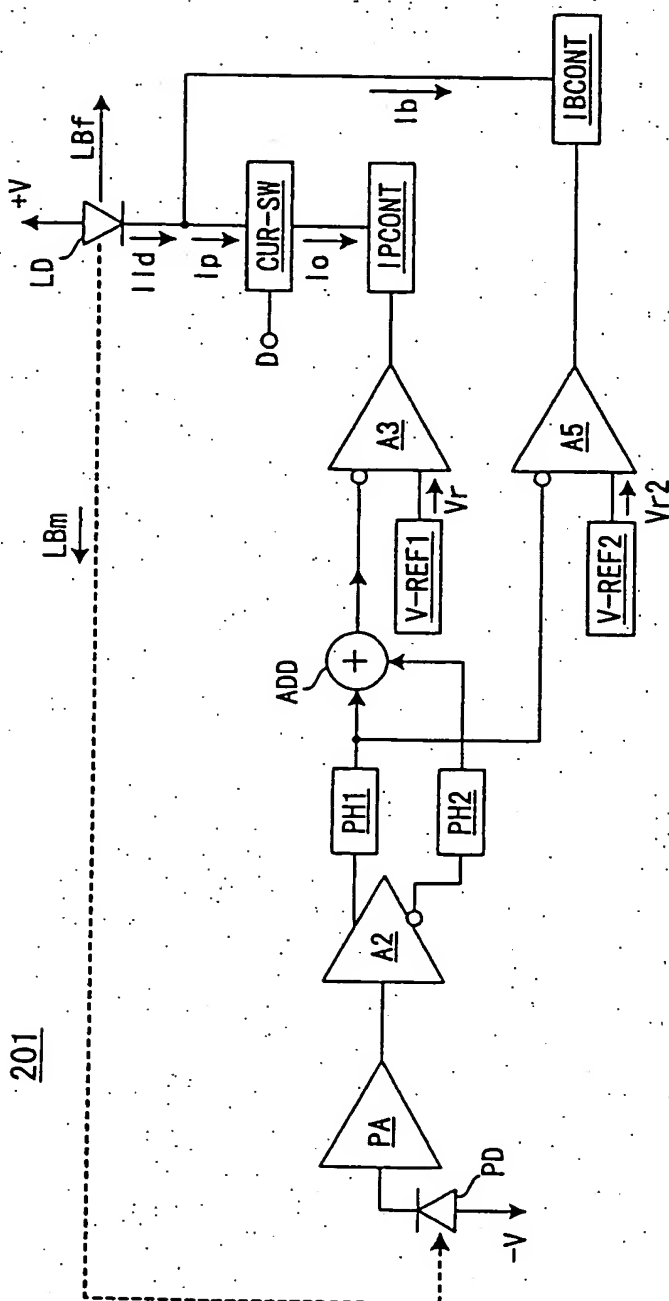


FIG. 10

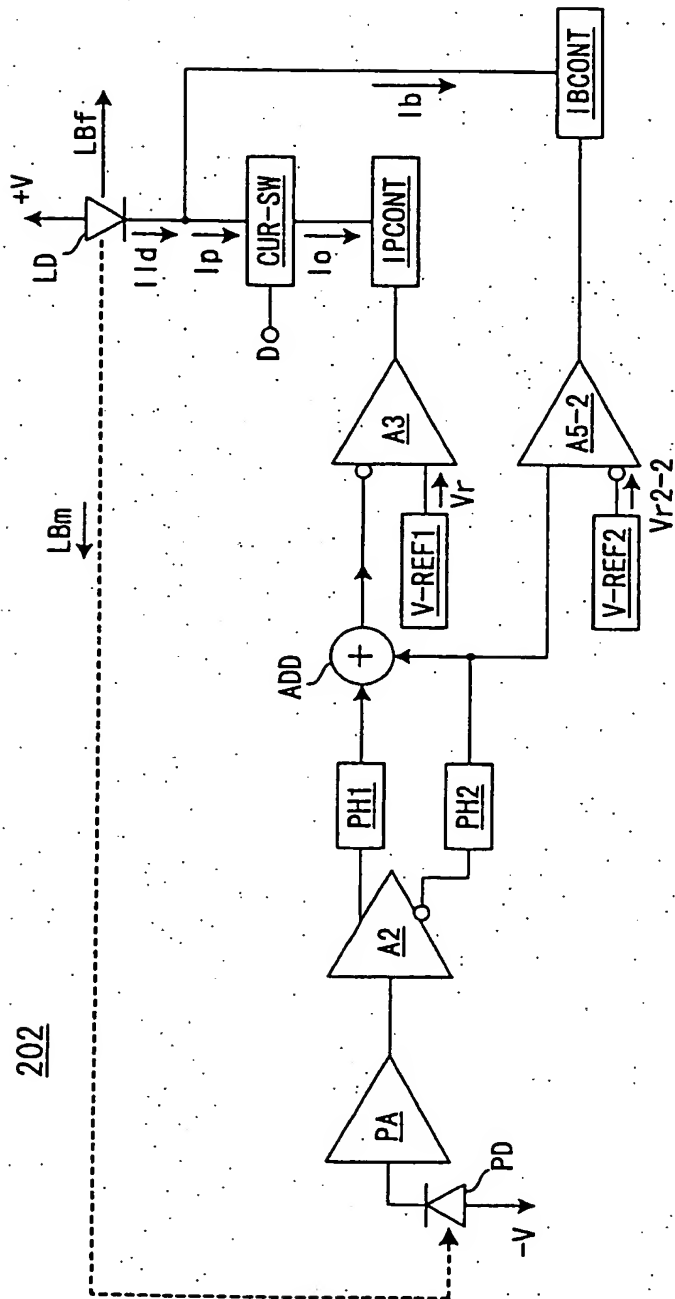


FIG. 11

FIG. 12A

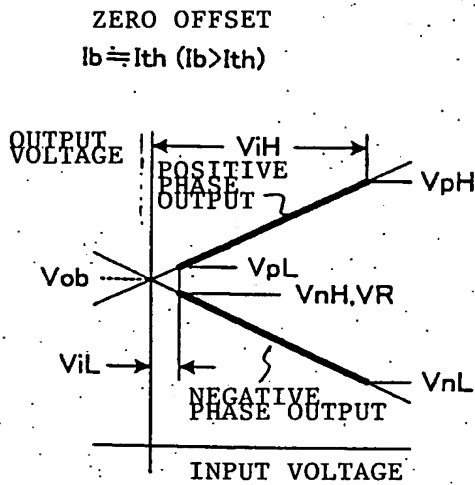


FIG. 12B

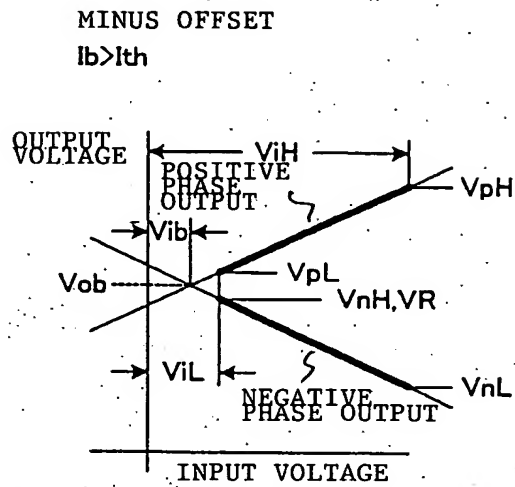


FIG. 12C

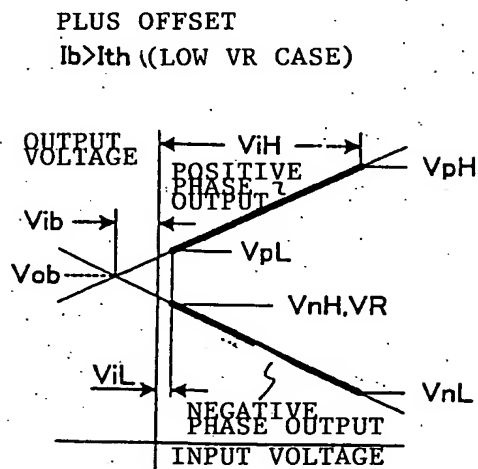


FIG. 12D

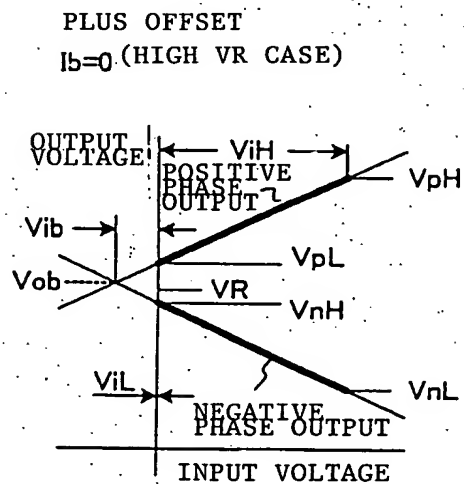




FIG. 13



FIG. 14



FIG. 15



FIG. 16

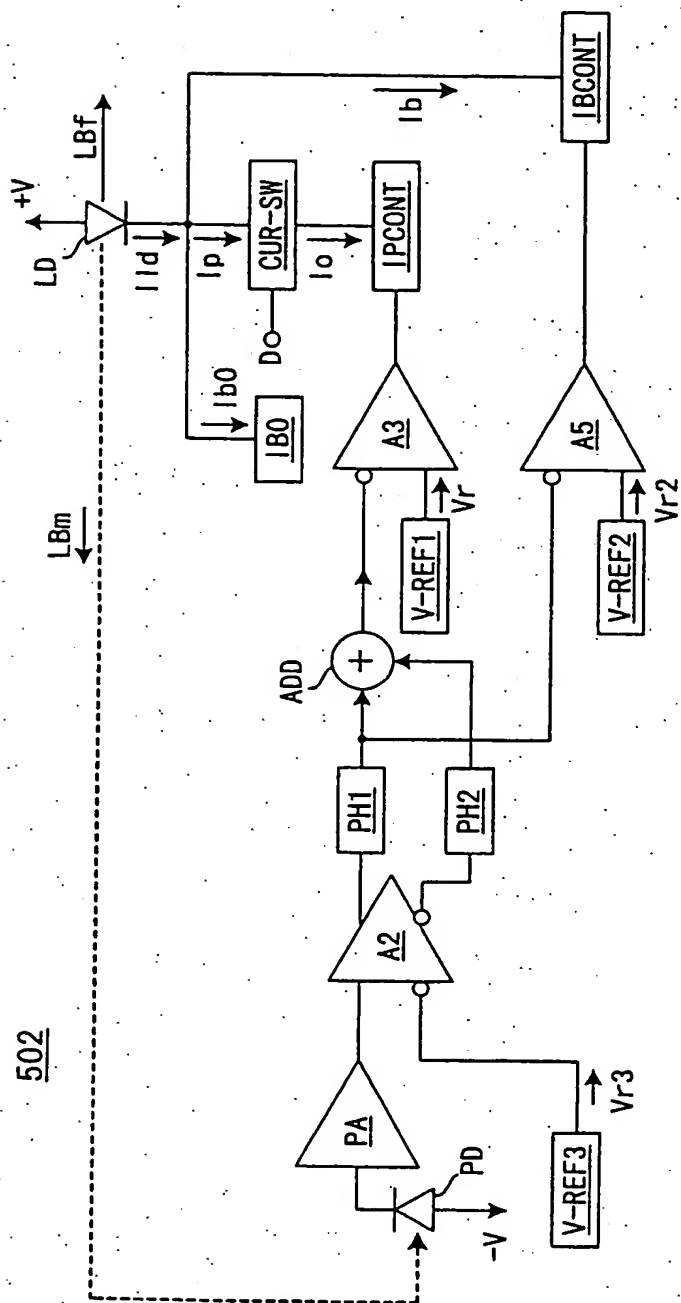


FIG. 17

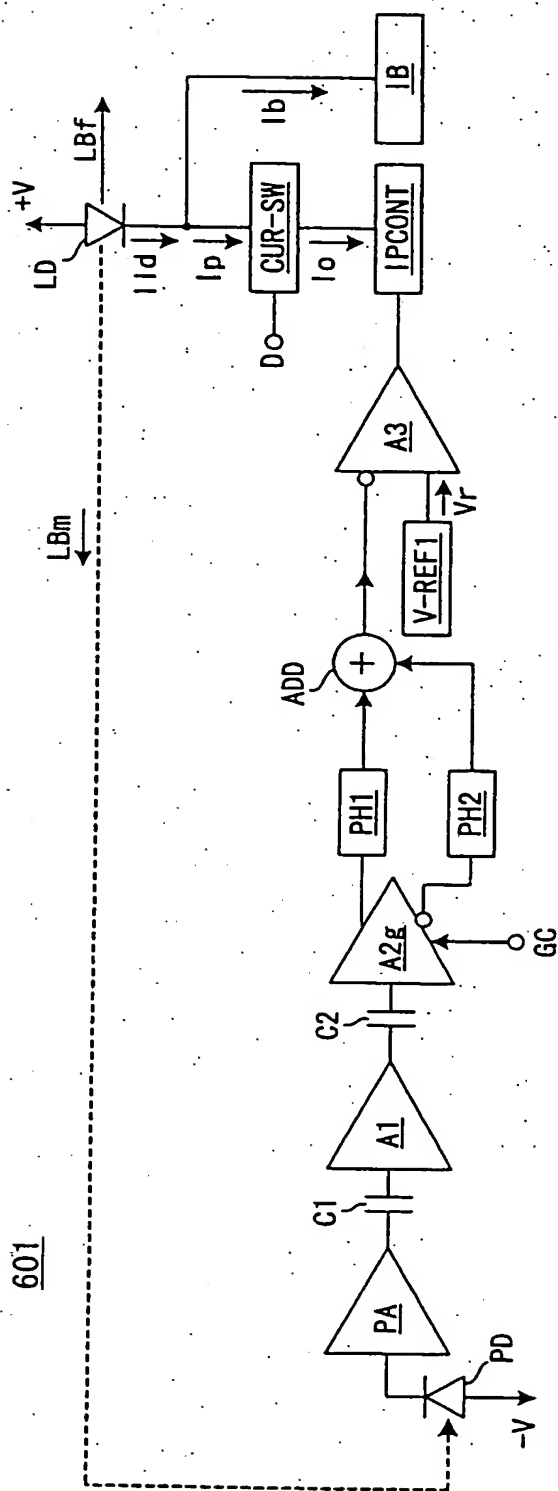
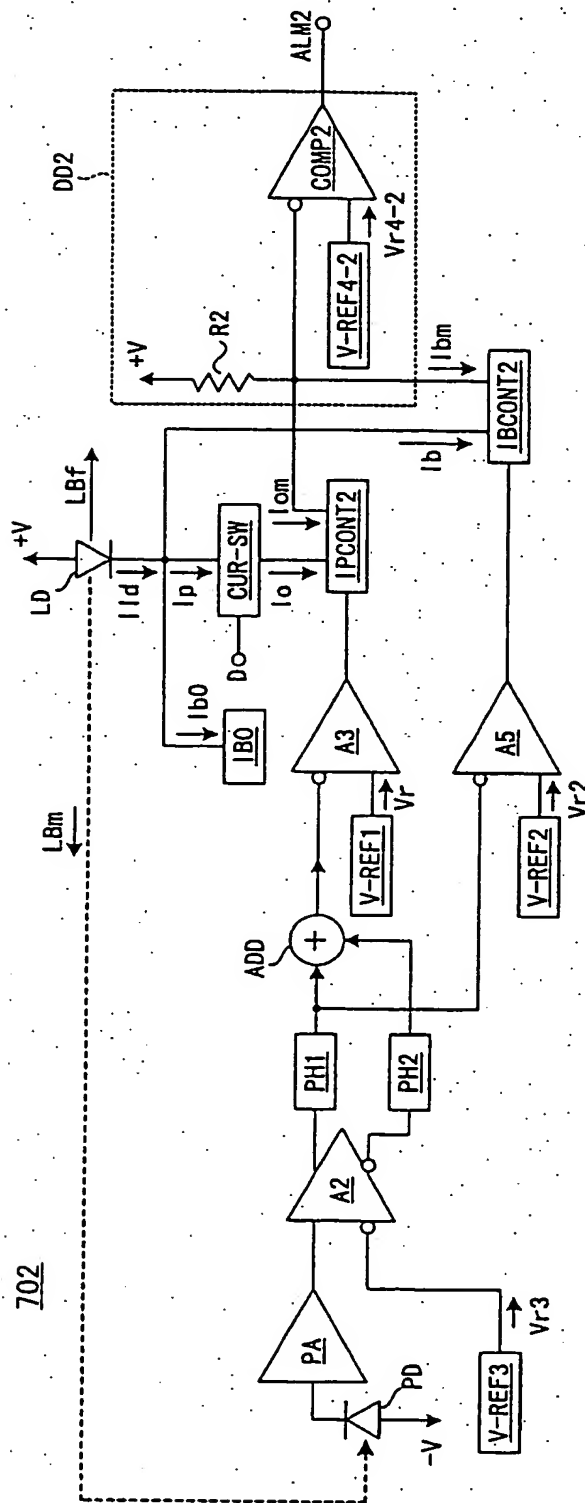


FIG. 18



FIG. 19



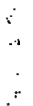


FIG. 21

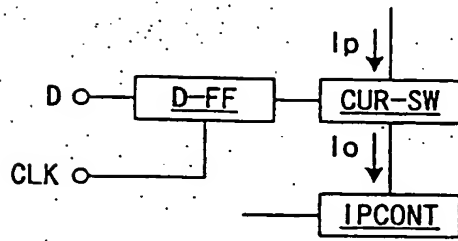


FIG. 22

FIG. 23A

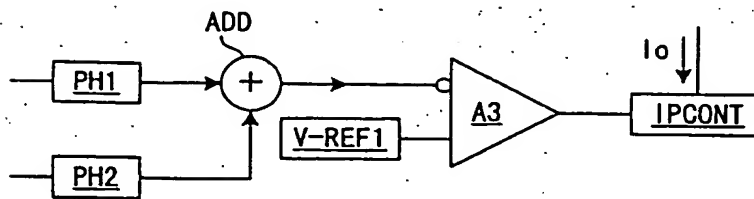


FIG. 23B

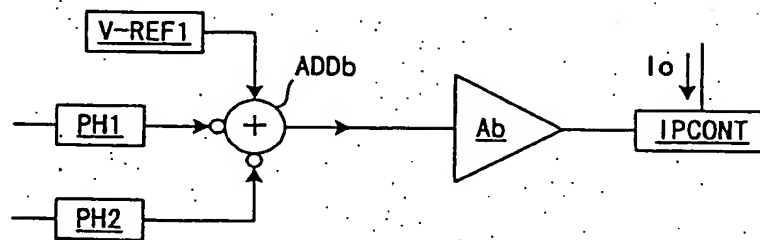


FIG. 23C

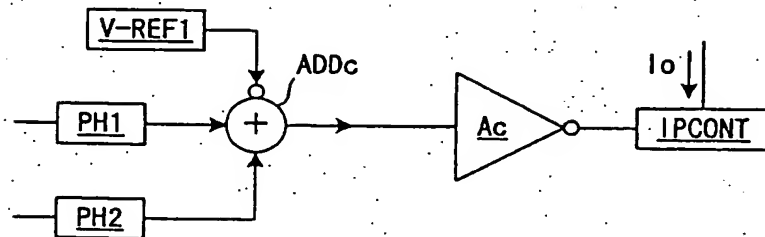


FIG. 23D

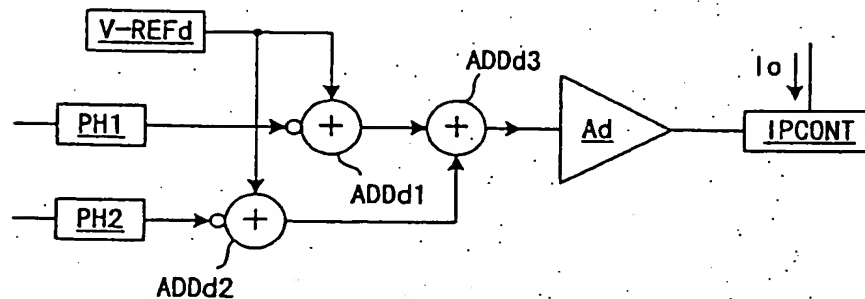


FIG. 24A

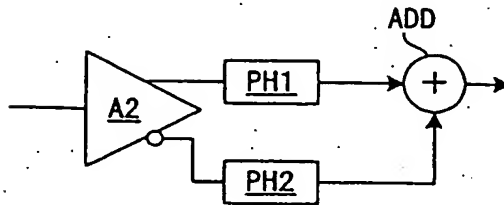


FIG. 24B

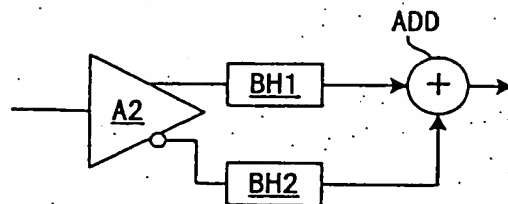


FIG. 24C

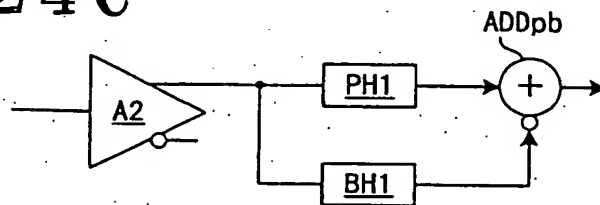
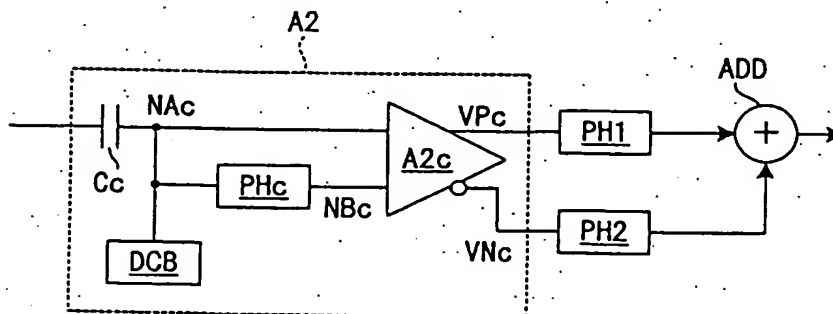


FIG. 25



Timing diagram for a differential amplifier with no signal and ideal bias. The diagram shows two square waves, V_{Nc} and V_{Pc} , which are 180 degrees out of phase. A horizontal dashed line represents the common-mode voltage. A vertical arrow labeled "OFFSET" indicates the difference between the common-mode voltage and the ideal bias level.

The diagram shows a differential amplifier circuit. It consists of two input stages, each enclosed in a dashed box and labeled $ADDd1$ and $ADDd2$. Each stage contains a PMOS transistor ($V1$ and $V2$ respectively) and an NMOS transistor (VRa and VRb respectively). The gates of the PMOS transistors are connected to a common bias voltage VDD . The gates of the NMOS transistors are connected to a common bias voltage VSS . The drains of the PMOS transistors are connected to a common load resistor network, which is also labeled $ADDd3$. The sources of the NMOS transistors are connected to a common load resistor network, which is also labeled $ADDd3$. The differential output voltage ΔVd is taken from the drains of the PMOS transistors. The total output voltage is given by the equation $VR = VRa + VRb$.